Appln No.: 09/381,556
Amendment Dated: May 23, 2005
Reply to Office Action of May 17, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for production of an autologous vaccine to tumor cells comprising transducing the tumor cells with one or more species of herpes simplex virus amplicon containing the gene for an immunostimulatory protein and at least one additional therapeutic gene to provide transient expression of the immunostimulatory protein and the therapeutic gene product by the cells, whereby the transduced cells act as an autologous vaccine for stimulating an immune response against the tumor cells.

2. (original) The method according to claim 1, wherein the tumor cells are transduced with the herpes simplex amplicons *ex vivo*.

3. (original) The method according to claim 1, wherein the tumor cells are transduced with the herpes simplex amplicon *in vivo*.

4. (currently amended) A method for inducing a protective immune response to tumor cells in a patient comprising the step ~~of transducing the tumor cells by~~ administering to the patient ~~with~~ one or more species of herpes simplex virus amplicon containing the gene for an immunostimulatory protein and at least one additional therapeutic gene to provide transient expression of the immunostimulatory protein and the therapeutic gene product by the cells~~, and administering transduced tumor cells to the patient~~ such that the tumor cells in the patient are transdcued with the herpes simplex virus amplicon and a protective immune response to the tumor cells is induced.

5. (currently amended) A method for inducing a protective immune response to tumor cells in a patient comprising the step one or more species of herpes simplex virus amplicon containing the gene for an immunostimulatory protein and at least one additional therapeutic gene to provide transient expression of the immunostimulatory protein and the therapeutic gene product by the cells, and administering transduced tumor cells to the patient ~~The method according to claim 4~~, wherein the tumor cells are transduced with the amplicon *ex vivo*~~, further comprising the step of introducing the transduced tumor cells into the patient~~.

6. (original) The method according to claim 4, wherein the amplicons are injected into the site of the tumor cells *in vivo*.

7. (previously presented) The method according to claim 1, wherein the immunostimulatory protein is a cytokine.

8. (original) The method according to claim 7, wherein the cytokine is interleukin-2.

9. (original) The method according to claim 7, wherein the cytokine is granulocyte macrophage colony stimulating factor.

10. (previously presented) The method according to claim 7, wherein the immunostimulatory protein is a chemokine.

11. (original) The method according to claim 10, wherein the chemokine is RANTES.

12. (previously presented) The method according to claim 1, wherein the immunostimulatory protein is a intercellular adhesion molecule.

13. (original) The method according to claim 12, wherein the intracellular adhesion molecule is ICAM-1.

14. (previously presented)The method according to claim 1, wherein the immunostimulatory protein is a costimulatory factor.

15. (original) The method according to claim 14, wherein the costimulatory factor is B7.1.

16. (previously presented)The method according to claim1, wherein a population of tumor cells is transduced with a plurality of species of amplicons containing the genes for the immunostimulatory protein and the additional therapeutic gene.

17. (previously presented) The method according to claim 1, wherein the additional therapeutic gene encodes a second immunostimulatory protein.

18. (previously presented) The method according to claim 17, wherein the tumor cells are transduced with amplicons encoding and expressing at least two species of cytokines.

19. (original) The method according to claim 18, wherein tumor cells are transduced with amplicons containing the genes for interleukin-2 and interleukin-12.

20. (original) The method according to claim 18, wherein the tumor cells are transduced with amplicons encoding and expressing a cytokine and a costimulatory factor.

21. (original) The method according to claim 20, wherein tumor cells are transduced with amplicons containing the genes for RANTES and B7.1.

22. (previously presented) The method according to claim 1, wherein the tumor cells are hepatoma cells or lymphoma cells.

23. (previously presented) A mixture containing a plurality of species of herpes simplex virus amplicons, including at least a first species of amplicon containing the gene for at least one immunostimulatory protein and a second species of amplicon containing the gene for an additional therapeutic gene product.

24. (previously presented)The mixture according to claim 23, wherein the immunostimulatory protein is a cytokine.

25. (original) The mixture according to claim 24, wherein the cytokine is interleukin-2 or granulocyte macrophage colony stimulating factor.

26. (previously presented) The mixture according to claim 23, wherein the immunostimulatory protein is a chemokine.

27. (original) The mixture according to claim 26, wherein the chemokine is RANTES.

28. (previously presented)The mixture according to claim 23, wherein the immunostimulatory protein is a intercellular adhesion molecule.

29. (original) The mixture according to claim 28, wherein the intracellular adhesion molecule is ICAM-1.

30. (previously presented)The mixture according to claim 23, wherein the immunostimulatory protein is a costimulatory factor.

31. (original) The mixture according to claim 30, wherein the costimulatory factor is B7.1.

32. (previously presented)The mixture according to claim 23, wherein the additional therapeutic gene encodes a second immunostimulatory protein.

33. (previously presented) The mixture according to claim 23, wherein the first and second species of amplicons contains genes encoding for RANTES and B7.1.

34. (previously presented) The mixture according to claim 23, wherein the first and second species of amplicons contains genes encoding for at least two species of cytokines.

35. (original) The mixture according to claim 34, wherein the amplicons contain genes encoding for interleukin-2 and interleukin-12.

36. (previously presented) Tumor cells transduced in accordance with the methods of claim 1.

37. (previously presented) Tumor cells transduced with a mixture of herpes simplex virus amplicons in accordance with claim 23.

38-40 (canceled)

41. (previously presented) The method according to claim 4, wherein the immunostimulatory protein is a cytokine.

42. (previously presented) The method according to claim 41, wherein the cytokine is interleukin-2.

43. (previously presented) The method according to claim 41 wherein the cytokine is granulocyte macrophage colony stimulating factor.

44. (previously presented) The method according to claim 41, wherein the immunostimulatory protein is a chemokine.

45. (previously presented) The method according to claim 44, wherein the chemokine is RANTES.

46. (previously presented) The method according to claim 4, wherein the immunostimulatory protein is a intercellular adhesion molecule.

47. (previously presented) The method according to claim 46, wherein the intracellular adhesion molecule is ICAM-1.

48. (previously presented) The method according to claim 4, wherein the immunostimulatory protein is a costimulatory factor.

49. (previously presented) The method according to claim 48, wherein the costimulatory factor is B7.1.

50. (previously presented) The method according to claim 4, wherein a population of tumor cells is transduced with a plurality of species of amplicons containing the genes for the immunostimulatory protein and the additional therapeutic gene.

51. (previously presented) The method according to claim 4, wherein the additional therapeutic gene encodes a second immunostimulatory protein.

52. (previously presented) The method according to claim 51, wherein the tumor cells are transduced with amplicons encoding and expressing at least two species of cytokines.

53. (previously presented) The method according to claim 52, wherein tumor cells are transduced with amplicons containing the genes for interleukin-2 and interleukin-12.

54. (previously presented) The method according to claim 18, wherein the tumor cells are transduced with amplicons encoding and expressing a cytokine and a costimulatory factor.

55. (previously presented) The method according to claim 20, wherein tumor cells are transduced with amplicons containing the genes for RANTES and B7.1.

56. (previously presented) The method according to claim 1, wherein the tumor cells are hepatoma cells or lymphoma cells.